



International Science & Engineering Visualization Challenge 2012 Participants' Guide

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CATEGORIES

Photography

Film or digital photographs and photomicrographs, as well as images from sensors, microscopes, telescopes and similar instruments. Photographs submitted to the competition may not exceed 10 MB. Visit the 2011 Winners page to see [last year's winning photographs](#).

Illustration

Hand-designed or computer-assisted illustrations and drawings produced to conceptualize the unseen or recreate an object, process or phenomenon without using text. Illustrations submitted to the competition may not exceed 50 MB. Visit the 2011 Winners page to see [last year's winning illustrations](#).

Posters & Graphics

Hand-designed or computer-assisted illustrations, graphics and/or photographs to conceptualize the unseen or recreate an object, process or phenomenon. Text often plays an integral part in communicating a poster's message. Posters and graphics submitted to the competition may not exceed 50 MB. Visit the 2011 Winners page to see [last year's winning posters and graphics](#).

Games & Apps

Games and apps enable players of all ages to interact, have fun, and learn about science, technology, engineering and/or mathematics. Entries must be self-guiding and include rules that explain the purpose, challenge and goal of the game or app. We accept video games and apps that are free of charge and compatible with Microsoft Windows, iOS and Android platforms. Games and apps will be evaluated based on the first five minutes of playing time. Visit the 2011 Winners page to see [last year's winning games](#).

Video

Video incorporates hand-designed or computer-assisted illustrations, graphics, photographs, and text into moving images that depict an object, process or phenomenon, or depict the natural world. Videos will be evaluated based on the first five minutes of running time. Visit the 2011 Winners page to see [last year's winning videos](#).

ELIGIBILITY CRITERIA

- Entries must convey science, technology, engineering and/or mathematics principles.
- Entries can be produced by individuals or by teams.
- Entries are not limited to academia, but are welcomed from all sectors and professions (e.g., illustrators, scientists, engineers, research groups, institutions, etc.).
- A maximum of one entry by an individual or team is permitted in each category.
- Entries can be submitted to one category only.
- Entries must match the description of the category to which they are submitted.
- Entries must not advertise or promote a commercial product visually or orally.
- Entries in the Games & Apps category must be free of charge and compatible with Microsoft Windows, iOS and/or the Android platform.
- Entries and registrant information must be submitted in English. Videos narrated in a foreign language are acceptable if English subtitles are included.

JUDGING CRITERIA

Visual Impact

A successful entry provides viewers with new scientific insight, is visually striking, and conveys the artist's skill and expertise in the chosen medium (e.g. photography). The entry also conveys the artist's mastery of the seven fundamentals (color, value, line, texture, shape, form and space), and principles (balance, emphasis, harmony proportion, variety, gradation, movement and rhythm) of design.

Effective Communication

A successful entry communicates in a clear and understandable manner, using plain language throughout, both written and spoken, in the entry itself and its accompanying text. Entries must convey science, technology, engineering and/or mathematics principles.

Freshness/Originality

A successful entry has an individual voice, vitality and energy and emphasizes new methods and insights to create a novel presentation or tell a compelling story.

JUDGING ROUNDS

Preliminary

- Qualifying entries (those that meet eligibility criteria and abide by all competition rules) are scored by scientists, engineers, and other professionals from NSF.
- Each entry is scored by a panel of judges.
- All entries are scored anonymously.

Semifinal

- Entries scored in the top half of each category in the preliminary round advance to the semifinal round. However, if more than 100 entries are received in a category, only the top 50 entries advance.
- Entries are scored by scientists, engineers and other professionals from NSF and from the journal *Science*.
- Each entry is scored by a panel of judges.
- All entries are scored anonymously.

Final

- The Top 10 entries from the semifinal round advance to this round.
- Entries that reach the final round are eligible to win the People's Choice award via an online public vote.
- Entries are scored by a panel of distinguished judges representing a variety of fields, including scientists, engineers, film producers, and graphic artists, who are chosen jointly by NSF and the journal *Science*.
- Each entry is scored by all of the final round judges.
- After all entries are scored anonymously, a final judges meeting is held to choose First Place and Honorable Mention winners.
- Judges, at their discretion, may choose not to award First Place in a category but may instead choose to award Honorable Mentions.
- All judges' decisions are final.

Winners will be notified individually before the public announcement of the official contest results. Contest results will be publicly announced in the journal *Science* and *Science Online*, and by a joint press release. NSF will also publish the names of the winners on its [website](#).

FREQUENTLY ASKED QUESTIONS

Q: May I submit custom code that I have written?

A: No. Unfortunately, we don't have the resources or manpower to compile/install custom software or the time to ramp up on running your particular simulation.

Q: I have custom code that I ported to Windows, and it has a compliant Windows Install Shield, so can I submit that?

A: No. For the same reason as cited in the previous question.

Q: I have some media produced on an SGI workstation. Is that OK to submit?

A: Not if we need an SGI workstation to view it. Unless otherwise noted, we do not accept entries unless they can be reviewed in a PC environment.

Q: May I submit Photoshop or QuarkXPress files?

A: No. Please submit your images using a TIFF, JPG, or BMP extension.

Q: Is PowerPoint OK?

A: No. PowerPoint decreases image quality and is primarily used for presentation purposes.

Q: What can I submit? What kind of things would be appropriate?

A: Please review our Eligibility Criteria and Rules pages for specific information. We encourage you to submit your entry!

Q: What characterizes a winning entry?

A: Entries are scored based on visual impact, effective communication, and originality. Winning entries should also include thorough and thought provoking answers to the entry form questions. See our Judging Criteria page for more information.

Q: Can I resubmit an entry this year that didn't win last year?

A: Yes, if you have made changes to improve your entry.

Q: I am from a foreign country. Can I submit an entry?

A: Yes, this is an international competition.

Q: Do works need to be submitted in English?

A: Yes. Unfortunately, we do not have the time and resources needed to translate entries submitted in foreign languages. Videos narrated in a foreign language are acceptable if English subtitles are included.

Q: What exactly do you mean by "visualization"?

A: Entries should show and explain some aspect of the world that people don't typically see. This can be a unique viewpoint (e.g., extreme magnification), non-obvious relationships, "impossible" views (e.g., standing inside the sun), extra-sensory views (e.g., X-ray photographs of galaxies), etc.

Q: What are the file size restrictions for my entry?

A: Photographs may not exceed 10 MB. Illustrations and Posters & Graphics may not exceed 50 MB.

Q: When does the clock start for the five-minute evaluation period allowed for Video and Games & Apps entries?

A: The five minutes begin when actual game play or video viewing starts.

Q: Are multi-player game entries allowed in the Games & Apps category?

A: Yes, but only if single-player participation is also possible.

Q: What is meant by “Apps” in the Games & Apps category?

A: For the purposes of the Challenge, an “app” is software that can be installed on a device operating on the Microsoft Windows, iOS or Android platforms, such as an iPad, tablet, smart phone or personal computer.

RULES

- Contest entry constitutes agreement to adhere to the rules and stipulations set forth by the contest sponsors.
- Any entrant or entry found to be in violation of any rule will be disqualified.
- Each entrant certifies, through submission to the contest, that the entry is his or her own original creative work and does not violate or infringe the creative work of others, as protected under copyright law.
- By entering the contest the entrant agrees to hold harmless, NSF, AAAS, *Science* and *Science Online* for all legal and administrative claims, to include associated expenses that may arise from any claims related to his or her submission or its use.
- Entrants retain all copyright and equivalent rights but give NSF, AAAS, *Science* and *Science Online* nonexclusive rights to use their names, likenesses, quotes and submissions for educational publicity and/or promotional purposes. This includes but is not limited to website display, print materials and exhibits.
- NSF, AAAS, *Science* and *Science Online* reserve the right to use semifinalist and finalist winners’ names and entries for educational publicity and/or promotional purposes, including website or exhibition of winning entries. It is understood that entries will be shared with reporters covering these awards and for promotion of the competition itself.
- NSF, AAAS, *Science* and *Science Online* will not be responsible for any claims or complaints from third parties should these visualizations be published or exhibited.
- Winners that are published by *Science* and *Science Online* will be required to sign an agreement granting nonexclusive publication and Web rights.
- Winners are responsible for all taxes or other fees connected with the prize received and/or travel paid for by the sponsoring organizations.

- NSF, AAAS, *Science* and *Science Online* will not respond to any claims or inquiries regarding contest results.
- NSF, AAAS, *Science* and *Science Online* have the final say on any point not outlined in the entry rules.
- Information requested on the entry form will be used to determine how and if the competition is meeting its goals, purposes and audience. Submission of this information is also necessary to contact entrants.
- Employees, contractors, officers or judges of the sponsoring organizations are not eligible to enter the competition.
- Finalist judges, either individually or as part of a team, are not eligible to enter the competition.
- If an insufficient number of qualified entries are received, the sponsoring organizations reserve the right to modify or cancel the competition prior to announcing winners.
- Should NSF decide to bring winning contestants to Washington, D.C., or to any other location for promotional and other purposes, expenses paid by NSF will be within the limits set forth in law according to federal travel regulations.
- NSF will fund travel for only one person per group or team entry if the entry wins. This person will be the contact person listed on the entry form. If this person is not available, he or she will designate a replacement from the team. If a single person wins multiple categories, he or she must represent all of the winning entries; designees are not permitted in this instance. Only persons listed on the original entry form may have their travel funded by NSF. All other persons accompanying the winner/group representative must arrange and fund their own travel and accommodations.
- All contestants agree that they, their heirs and estates shall hold harmless the United States, the employees of the federal government, and all employees of NSF, AAAS, *Science* and *Science Online* for any and all injuries and/or claims arising from participation in this contest, to include that which may occur while traveling to or participating in contest activities.
- A lead contact person must be designated for team submissions. The order in which names are listed on the entry form is how the names will appear in the journal *Science*, *Science Online* and on the NSF website.